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Proposal to Study Conservation and Renewable Energy Potential in Montana

Summary: Given the fundamental changes occurring in energy markets, the EQC should study energy conservation and renewable energy generation capacity in Montana and make recommendations regarding development of these resources to the next session of the legislature.

Background: Through out the late 1980s to about 1996 Montana Power Company (MPC) ran conservation programs based on assumptions about cost effectiveness based on the "avoided cost" of alternative electric generation. For example, MPC would only invest in a hot water heater wrap if the value of the energy saved was above what it would cost to acquire a similar amount of energy from a new generator. All conservation programs run by all utilities in Montana ran the same "cost effectiveness criteria".

By the mid-1990s MPC believed that it had acquired most of the cost effective conservation on its system and cut conservation program budgets by about 70%. This decision was based on cost effectiveness tests which assumed the cost of electricity somewhere around 2 to 2.5 cents per kilowatt hour. Electric restructuring changed the entire context for conservation programs. Recognizing that individual consumers demand short term return on investments and might not be willing to make conservation investments which were economically cost effective over a long term, policy makers established the USBC to assure that conservation programs continued to operate. The USBC amount was set at 2.4% of 1995 revenues. Funding from the 2.4% was also dedicated to low income bill assistance and renewable resource programs. The 2.4% incorporated cost effectiveness assumptions about the cost of electricity at that time.

In the last two years Montana has experienced dramatic increases in the price of electricity. Current market prices are much more than the 2.5 cents at the time the USBC percentage was established. Even conservative estimates are that Montana faces prices between 5 and 6 cents over the long term. This increase means that much more "cost effective" conservation is available. MPC has estimated that a cost assumption of 3.5 cents in its calculations of conservation potential demonstrated an additional 98 megawatts of conservation on the MPC system. **In sum, given the higher prices of electricity, there is much more cost effective conservation available in Montana.**

All of the same conditions apply to renewable resource development. In the past, because prices of electricity were well below the cost of renewable energy generation, programs developed by MPC in particular were essentially research and development. But current conditions and prices have changed that. Wind power in particular is now competitive with other sources of generation.

At the same time restructuring has raised a number of questions about the acquisition of these resources. Conservation has unique characteristics which do not fit the "commodity" market model currently being pursued in electric restructuring. Yet virtually everyone agrees that conservation is an important resource to pursue. Indeed, the creation of the power pool by the last session of the legislature is a reflection of that recognition. But the mechanisms to bring conservation resources and renewable resources which lack market infra-structure, such as "distributed" systems (small site based generation), remain poorly defined.

Potential Study Issues

Potential questions to address (these are intended as examples):

How much conservation potential exists in Montana and at what cost?

What are market barriers to acquiring cost effective conservation?

What mechanisms might facilitate acquiring cost effective conservation?

Which sectors (commercial, industrial, residential, agricultural) have the most conservation potential?

What programs can Montana participate in at the regional level to develop renewable energy?

How much renewable energy potential exists in Montana and at what cost?

What are market barriers to acquiring renewable resources?

What are the environmental impacts of renewable technologies?

What renewable technologies is Montana positioned to take advantage of?

What are the pros and cons of central station vs distributed renewable development?

Resources: Much work has been done in this area. The primary value of an EQC study would be to bring information together from a variety of existing sources. The EQC could draw on:

1. The Power Planning Council
2. PSC
3. Consumer Counsel
4. Department of Environmental Quality
5. Private Groups including, MPC, Northwest Energy Coalition etc. etc.

Coordination: The EQC can coordinate with the TAC and Consumer Counsel because Senator McNutt is on all three committees.